Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Currently Amended) A method of arranging image data representing a motion picture sequence within a memory sub-system in an image data processing system, the method comprising using dedicated hardware and/or a processor to dynamically selecting the arrangement of image data for successive pictures of said sequence in said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics of the performance of said processing system, and known characteristics of subsequent processing of said image data within said image processing system;

        wherein the measured characteristics of said image data includes at least one of:

            variability of motion vectors encoded within received data,

            picture type, and

            image resolution;

        wherein the measured characteristics of the performance of said processing system includes at least one of:

            data cache stall rates for a cache memory in the memory sub-system,

            processor utilization,

            quality of service or other qualitative measurements that are perceptible to an end user of content being processed, and

            bandwidth of a link feeding data into or out of said image processing system;

        wherein the known characteristics of subsequent processing of said image data includes at least one of:

            encoded data size per picture of the sequence, and

            advance information relating to the content of the image stream contained in a data file.

2.   (Previously Presented) A method as claimed in claim 1, wherein said memory subsystem includes an image data storage memory constructed from paged memory.

3.   (Previously Presented) A method as claimed in claim 1, wherein said memory subsystem includes a processor cache memory in addition to a main image data storage memory.

4.   (Currently Amended) A method as claimed in claim 1, wherein the step of selecting the arrangement of image data in storage memory comprises selecting between a linear format, whereby image data is stored in the memory sub-system on a line-by-line basis, and at least one kind of tiled format, whereby two-dimensional groups of pixels are grouped in the memory sub-system.

5.   (Currently Amended) A method as claimed in claim 3 4 wherein where the memory sub-system includes cache memory, said tiled format is defined such that data for one tile corresponds to a whole number of cache blocks.

Claim 6: Cancelled.

7.   (Currently Amended) A method as claimed in claim 6 1, wherein the method looks ahead in the motion picture sequence so as to measure said characteristics of the image data for a given portion of the sequence and selects the memory arrangement prior to processing that portion.

8.   (Currently Amended) A method as claimed in claim 6 1, wherein measured characteristics of the image data at one part of the sequence are used effectively to predict characteristics of a subsequent portion of the sequence, and the memory arrangement controlled according to measured characteristics of recently processed portions of the sequence.

9.   (Currently Amended) A method as claimed in claim ~~6~~ 1 wherein the <u>method comprising averaging over a period of time the</u> measurement of image data characteristics ~~is averaged over a period of time~~.

10.   (Currently Amended) A method as claimed in claim ~~6~~ 45, wherein ~~where~~ the variability of motion vectors is measured separately between vertical and horizontal planes, each having a different effect in the selection of the storage arrangement.

Claims 11-12: Cancelled.

13.   (Currently Amended) A method as claimed in claim ~~12~~ 1, wherein <u>the method includes the system performance measurement, and wherein the</u> system performance is measured on a test basis using a sample of data, prior to processing the data.

14 .   (Currently Amended) A method as claimed claim ~~11~~ 1, wherein <u>the method includes the system performance measurement, and wherein the</u> system performance measured while processing a first part of the sequence is used in selecting the arrangement of memory for a subsequent part of the sequence.

15.   (Currently Amended) A method as claimed in claim 1, wherein the method comprises using knowledge of subsequent processing steps to influence the selection of the arrangement of data in <u>the</u> memory <u>sub-system</u>.

16.   (original) A method as claimed in claim 1, wherein the selection of memory arrangement is implemented at least partly by changing parameters used by memory-accessing program code.

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17.   (Currently Amended) A method as claimed in claim 1, wherein the selection of memory arrangement is implemented at least partly based upon a selection of ~~by selecting~~ different versions of code to be executed.

18.   (Currently Amended) A method ~~of~~ as claimed in claim 1, wherein ~~processing image data representing a motion picture sequence within a memory sub-system in an image data processing system,~~ the memory sub-system ~~including~~ includes processor cache memory in addition to main image data storage memory, and wherein the selecting is performed ~~the method comprising selectively~~ using cache-handling functions ~~under program control, according to at least one of: measured characteristics of said image data and measured characteristics of the performance of said processing system~~.

19.   (Currently Amended) A method as claimed in claim 18, wherein a block allocation function, whereby a new cache-block is allocated and overwritten without pre-loading ~~it~~ the new cache-block from the main memory, is used selectively according to said measured characteristics.

20.   (original) A method as claimed in claim 18, wherein, in addition, cache pre-fetching is activated selectively in accordance with the measured characteristics.

Claim 21: Cancelled.

22.   (Currently Amended) An image data processing system, the processing system including a memory sub-system and means for dynamically selecting the arrangement of image data for successive frames of a motion picture sequence within said memory sub-system according to at least one of: measured characteristics of said image data, measured characteristics

of the performance of said processing system, and known characteristics of subsequent

processing of said image data within said image processing system;

wherein the measured characteristics of said image data includes at least one of:

variability of motion vectors encoded within received data,

picture type, and

image resolution;

wherein the measured characteristics of the performance of said processing system

includes at least one of:

data cache stall rates in the memory sub-system,

processor utilization,

quality of service or other qualitative measurements that are perceptible to an end

user of content being processed, and

bandwidth of a link feeding data into or out of said image processing system;

wherein the known characteristics of subsequent processing of said image data includes

at least one of:

encoded data size per picture of the sequence, and

advance information relating to the content of the image stream contained in a

data file.

23.   (Previously Presented) A system as claimed in claim 22, wherein the memory

sub-system includes an image data storage memory constructed from paged memory.

24.   (Currently Amended) A system as claimed in claim 23, wherein said memory

sub-system includes a processor cache memory in addition to an image data storage memory.

25.   (Currently Amended) A system as claimed in claim 22, wherein the means for selecting the arrangement of image data in said memory sub-system is arranged for selecting between a linear format, whereby image data is stored in the memory sub-system on a line-by-line basis, and at least one kind of tiled format, whereby two-dimensional groups of pixels are grouped in the memory sub-system.

26.   (Currently Amended) A system as claimed in claim ~~24~~ 25, wherein where the memory sub-system includes cache memory, said tiled format is defined such that data for one tile corresponds to a whole number of cache blocks.

Claim 27: Cancelled.

28.   (Currently Amended) A system as claimed in claim ~~27~~ 22, wherein the means for dynamically selecting is arranged to look ahead in the motion picture sequence so as to measure said characteristics of the image data for a given portion of the sequence and select the memory arrangement prior to processing that portion.

29.   (Currently Amended) A system as claimed in claim ~~27~~ 22, wherein the means for dynamically selecting is arranged such that measured characteristics of the image data at one part of the sequence are used effectively to predict characteristics of a subsequent portion of the sequence, and the memory arrangement controlled according to measured characteristics of recently processed portions of the sequence.

30.   (Currently Amended) A system as claimed in claim ~~27~~ 22, wherein the measuring means includes means for averaging measured image data characteristics over period of time.

31.   (Currently Amended) A system as claimed in claim ~~27~~ 22, wherein ~~where~~ the measuring means is arranged to measure variability of motion vectors, the measuring means is arranged to do so separately between vertical and horizontal planes, each having a different effect in the selection of the storage arrangement.

Claims 32-33: Cancelled.

34.   (Currently Amended) A system as claimed in claim ~~32~~ 22, wherein the means for measuring system performance is arranged to do so at least partly on a test basis using a sample of data, prior to processing the data.

35.   (Currently Amended) A system as claimed in claim ~~32~~ 22, wherein the selecting means and means for measuring system performance are arranged such that system performance measured while processing a first part of the sequence is used to influence the arrangement of the memory sub-system for a subsequent part of the sequence.

36.   (Currently Amended) A system as claimed in claim ~~32~~ 22, wherein the selecting means uses knowledge of a set of subsequent processing steps to influence the selection of the arrangement of data in the memory sub-system.

37.   (Currently Amended) A system as claimed in claim 22, wherein the selecting means comprises dedicated hardware and/or a processor ~~image processing system is implemented at least in part by program code and a programmable processing unit~~.

38.   (Previously Presented) A system as claimed in claim 22, wherein the selecting means is implemented at least partly by means for changing parameters used in accessing said memory sub-system.

39.   (Currently Amended) A system as claimed in claim 22, wherein the selecting means comprises dedicated hardware or a processor ~~is implemented at least partly by selecting different versions of code to be executed~~.

40.   (Currently Amended) A~~n image data processing~~ system as claimed in claim 22, wherein ~~including a memory sub-system for storing image data representing a motion picture sequence being processed,~~ the memory sub-system ~~including~~ includes a processor cache memory in addition to main image data storage memory, and wherein the selecting is performed ~~the system being arranged for~~ using cache-handling functions ~~selectively under program control, according to at least one of: measured characteristics of said image data and measured characteristics of the performance of said processing system~~.

41.   (Previously Presented) A system as claimed in claim 40, wherein the system is arranged such that a block allocation function, whereby a new cache-block is allocated and overwritten without pre-loading the new cache-block from the main memory, is selectively used according to said measured characteristics.

42.   (original) A system as claimed in claim 40, wherein the system is arranged such that cache pre-fetching is activated selectively in accordance with the measured characteristics.

Claim 43: Cancelled.

44.   (Currently Amended) A computer ~~program product comprising a computer~~ readable instruction medium with instructions for causing a data processing system to implement a method of arranging image data representing a motion picture sequence within a memory sub-system in an image data processing system, the method comprising:

dynamically selecting the arrangement of image data for successive pictures of said

sequence in said memory <u>sub-system</u> according to at least one of: measured characteristics of

said image data, measured characteristics of the performance of said processing system, and

known characteristics of subsequent processing of said image data within said image processing

system<u>;</u>

<u>wherein the measured characteristics of said image data includes at least one of:</u>

<u>variability of motion vectors encoded within received data,</u>

<u>picture type, and</u>

<u>image resolution;</u>

<u>wherein the measured characteristics of the performance of said processing system</u>

<u>includes at least one of:</u>

<u>data cache stall rates for a cache memory in the memory sub-system,</u>

<u>processor utilization,</u>

<u>quality of service or other qualitative measurements that are perceptible to an end</u>

<u>user of content being processed, and</u>

<u>bandwidth of a link feeding data into or out of said image processing system;</u>

<u>wherein the known characteristics of subsequent processing of said image data includes</u>

<u>at least one of:</u>

<u>encoded data size per picture of the sequence, and</u>

<u>advance information relating to the content of the image stream contained in a</u>

<u>data file.</u>

45.   (New) The method of claim 1, wherein the dynamic selection is performed

according to the variability of motion vectors encoded within received data.

46.   (New) The method of claim 1, wherein the dynamic selection is performed

according to picture type.

47.   (New) The method of claim 1, wherein the dynamic selection is performed according to image resolution.

48.   (New) The method of claim 1, wherein the dynamic selection is performed according to data cache stall rates for a cache memory in the memory sub-system.

49.   (New) The method of claim 1, wherein the dynamic selection is performed according to processor utilization.

50.   (New) The method of claim 1, wherein the dynamic selection is performed according to quality of service or other qualitative measurements that are perceptible to an end user of content being processed.

51.   (New) The method of claim 1, wherein the dynamic selection is performed according to bandwidth of a link feeding data into or out of said image processing system.

52.   (New) The method of claim 1, wherein the dynamic selection is performed according to encoded data size per picture of the sequence.

53.   (New) The method of claim 1, wherein the dynamic selection is performed according to advance information relating to the content of the image stream contained in a data file.

54.   (New) The system of claim 22, wherein the dynamic selection is performed according to the variability of motion vectors encoded within received data.

55.   (New) The system of claim 22, wherein the dynamic selection is performed according to picture type.

56.   (New) The system of claim 22, wherein the dynamic selection is performed according to image resolution.

57.   (New) The system of claim 22, wherein the dynamic selection is performed according to data cache stall rates for a cache memory in the memory sub-system.

58.   (New) The system of claim 22, wherein the dynamic selection is performed according to processor utilization.

59.   (New) The system of claim 22, wherein the dynamic selection is performed according to quality of service or other qualitative measurements that are perceptible to an end user of content being processed.

60.   (New) The system of claim 22, wherein the dynamic selection is performed according to bandwidth of a link feeding data into or out of said image processing system.

61.   (New) The system of claim 22, wherein the dynamic selection is performed according to encoded data size per picture of the sequence.

62.   (New) The system of claim 22, wherein the dynamic selection is performed according to advance information relating to the content of the image stream contained in a data file.